UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,500	02/14/2002	Mark Stephen Amshoff	PU010080	8797

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 August 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.
      4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-19_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
      Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
      Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
      a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
      Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
      Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   In view of the appeal brief filed on 8/11/2008, PROSECUTION IS HEREBY

REOPENED. New rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia

(Pub No. US 2002/0144286 A1), in view of Brown (Pub No. US 2002/0100057 A1).

For **claim 17**, Ovadia teaches in a transmission system (Fig. 1) comprising a

plurality of channels ([0045], lines 2-3), wherein information is transmitted via one or

more data transmission channels among the plurality of channels by a modulation

arrangement (QAM, [0047], line 7) in which information bits are encoded by symbols

selected from a known symbol constellation (it is inherent arrangement of modulation),

and further wherein the symbol constellation used for encoding the information bits is

selected from a set of symbol constellations established in accordance with a known

standard (QAM, [0047], line 7), a channel search method for application at a receiving

end of the data transmission channel comprising the steps of:

sequentially scanning (sweeps, [0047], line 1) at least two selected subsets (non-

digital, [0045], lines 8-9, and data channel, [0047], line 5) of said plurality of channels

([0045], lines 2-3);

upon not finding the data channel in the sequential scanning step (not achieved,

[0047], lines 5-6), scanning at least one (next QAM channel, [0047], line 7), but less

than all (510 to 506 -Fig. 5, only data channel, not non-digital), of the selected subsets

of the plurality of channels for a channel having a data signal modulated thereon in

accordance with symbols from a symbol constellation other than one of said symbol

constellations established in accordance with said known standard (the "non-standard

data channel") (it is inherent when modulation changes, the symbol constellations

change); and

upon not finding the data channel in the sequential scanning step or the non-

standard data channel in the step of scanning at least one of the selected subsets,

scanning all of said plurality of channels (through the loop bandwidth, [0047], line 9) for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard ([0047]).

However, Ovadia failed to teach sequentially scanning for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard (the "data channel").

Brown teaches sequentially scanning for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard (the "data channel") (see 310 and 320 in Fig. 3A showing sequentially scanning of a plurality of channels for a carrier frequency of a digital data signal in a DOCSIS system. See [0026], last 4 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Brown to obtain the invention as specified, for finding the correct data channel.

4.   **Claims 1-6, 8-13, and 15, 16, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (Pub No. US 2002/0144286 A1), in view of Brown (Pub No. US 2002/0100057 A1), and Beser (U.S. Patent 6,212,563 B1).

For **claim 1**, Ovadia teaches in a transmission system (Fig. 1) comprising a plurality of transmission channels ([0045], lines 2-3) wherein at least one of said plurality of channels carries a data signal (data, and [0045], line 9) thereover, a channel search

method (Title) for finding a data channel available (identifying data channels, [0014], line

2. Note that [0014] is related to [0045]) for use by a terminal located at a downstream

end (116-Fig. 1) of said plurality of transmission channels, said method comprising the

steps of:

sequentially scanning (sweeps, [0047], line 1) at least two selected subsets (non-

digital, [0045], lines 8-9, and data channel, [0047], line 5) of said plurality of channels

([0045], lines 2-3); and

if the data channel scanned for in the preceding step is not found (not achieved,

[0047], lines 5-6), further sequentially scanning (next QAM channel, [0047], line 7) at

least one, but less than all (510 to 506 -Fig. 5, only data channel, not non-digital), of the

selected subsets of the plurality of channels for a channel.

However, Ovadia failed to teach sequentially scanning for a channel having a

data signal modulated thereon in accordance with symbols from one of said symbol

constellations established in accordance with said known standard (the "data

channel").

Brown teaches sequentially scanning for a channel having a data signal

modulated thereon in accordance with symbols from one of said symbol constellations

established in accordance with said known standard (the "data channel") (see 310 and

320 in Fig. 3A showing sequentially scanning of a plurality of channels for a carrier

frequency of a digital data signal in a DOCSIS system. See [0026], last 4 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Brown to obtain the invention as specified, for finding the correct data channel.

Further, Ovadia in view of Brown fail to specifically teach having a data signal transmitted at other than said predetermined modulation protocol.

Beser teaches having a data signal transmitted at other than said predetermined modulation protocol (including 4, 16, 64, or 256 levels, see col. 6, lines 65-66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Brown and Beser to obtain the invention as specified, for different modulation protocols.

For **claim 2**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 including the further step of:

sequentially scanning all of said plurality of channels for a channel having a data signal transmitted at said predetermined modulation protocol ([0047], lines 5-9).

For **claim 3**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 wherein the first sequential scanning step is repeated at least once prior to beginning the step of scanning at least one of the selected subsets (506 and 510 –Fig. 5).

For **claim 4**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 1). However, they fail to specifically teach that the modulation protocol is 16 QAM.

Beser teaches that the modulation protocol is 16 QAM (col. 6, line 66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Brown and Beser to obtain the invention as specified, for different modulation protocols.

For **claim 5**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 1). However, they fail to specifically teach that the modulation protocol is 4 QAM.

Beser teaches that the modulation protocol is 4 QAM (col. 6, line 66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Brown and Beser to obtain the invention as specified, for different modulation protocols.

For **claim 6**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 wherein data transmitted via said data channel available for use by said terminal is in accordance with the DOCSIS standard ([0025], line 8).

For **claim 8**, it is a bi-directional communication device (Fig. 2) and means for claim of claim 1, therefore it is rejected for the same reason above.

For **claims 9 -13**, they are corresponding to claims 2-6 respectively, therefore they are rejected for the same reason above.

For **claim 15**, Ovadia, Brown, and Beser teach everything claimed as applied above (see claim 8). In addition, Ovadia teaches the bi-directional communication

device of claim 8 wherein the bi-directional communication device is a modem ([0011],

lines 1-2).

For **claim 16**, Ovadia, Brown, and Beser teach everything claimed as applied

above (see claim 8). In addition, Ovadia teaches the bidirectional communication device

of claim 15 wherein the modem is a cable modem ([0011], lines 1-2).

For **claims 18 and 19**, they are corresponding to claims 4 and 5 respectively,

therefore they are rejected for the same reason above.

1.   **Claims 7 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ovadia (Pub No. US 2002/0144286 A1), Brown, in view of Beser (U.S. Patent

6,212,563 B1) and Van Beek (Pub No. US 2002/0083465 A1).

For **Claim 7**, Ovadia, Brown, and Beser teach everything claimed as applied

above (see claim 1). However, they fail to specifically teach the Euro-DOCSIS standard.

Van Beek teaches the Euro-DOCSIS standard ([0011], 2nd line from the end).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine Ovadia. with Brown, Beser, and Van Beek

to obtain the invention as specified, for different standards.

For **claim 14**, it is corresponding to claim 7, therefore it is rejected for the same

reason above.

Citation of Pertinent Art

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Roeck et al. (US Patent No. 6,574,796) teach Fast and reliable data carrier detection by a cable modem in a cable television plant.

Tults (US Patent No. 4,763,195) teaches Television tuning system with provisions for quickly locating active cable channels.

Response to Arguments

2.   Applicant's arguments, filed 8/11/2008, have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
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Examiner, Art Unit 2416